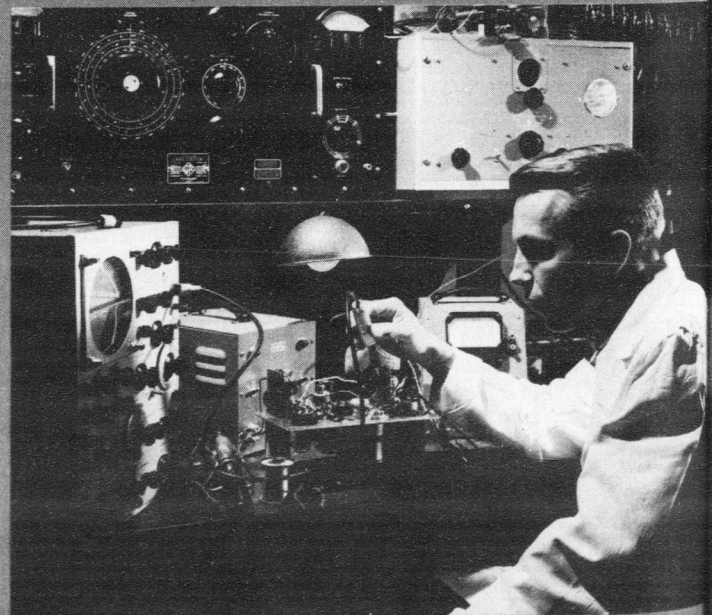
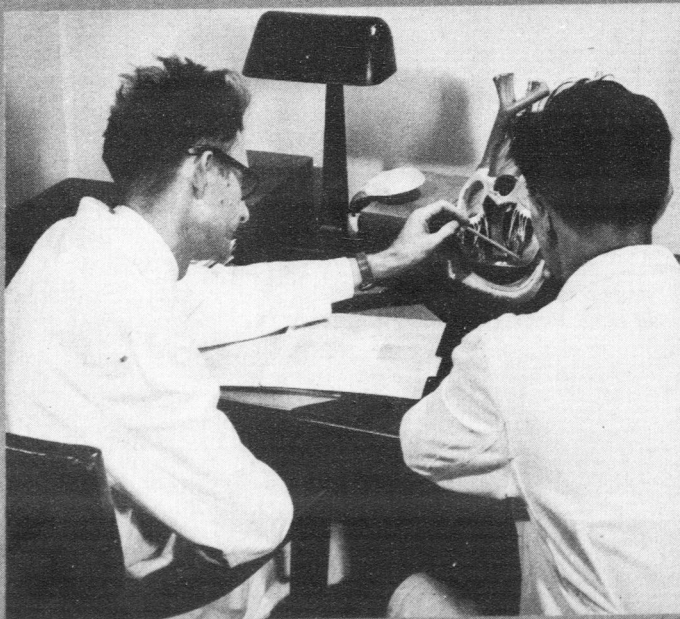
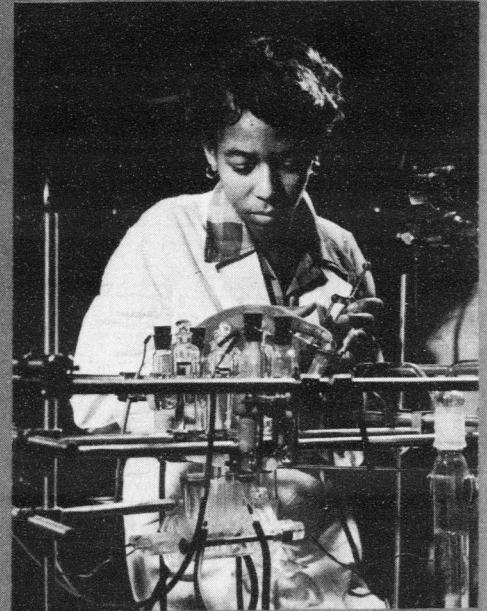


The Scientific Team
in Cardiovascular
RESEARCH

see overleaf



The Scientific Team in Cardiovascular Research

The early disciples of Koch and Pasteur made significant advances using individual skills alone. Research today, however, looks to teamwork for the most consistent progress.

The "lineup" against the heart diseases, for example, may include investigators from many different disciplines, such as:

Anatomy	Hematology	Physical biology
Biology	Industrial hygiene	Physics
Biostatistics	Microbiology	Physiology
Chemistry	Nutrition	Psychiatry
Electrocardiography	Pathology	Rehabilitation
Electronics	Pharmacology	Roentgenology
Epidemiology	Physical anthropology	Social anthropology

At Public Health Service's National Institutes of Health, the research team of the National Heart Institute laboratory of chemical pharmacology calls upon many different skills in studying the fate of drugs in the body. Here the observations of the basic chemical and physical sciences are blended in developing methods for the estimation of drugs such as the barbiturates, local anesthetics, narcotic analgesics, dicoumarin-type anticoagulants, anti-inflammatory agents, sympathomimetic amines, and adrenergic blocking agents.

Electronic instruments, such as the spectrophotometer, may aid in measuring quickly and accurately as little as a millionth of a gram of a drug in a few drops of blood.

Involved in this laboratory and clinical study are biochemists, pharmacologists, physiologists, nurses, physicians, rehabilitation workers, roentgenologists, and others. Investigators may employ methods as old as science, along with modern radiochemistry. In the latter, the isotope labeling technique has been successfully applied, for example, to study the complete fate of pentobarbital in the body.

The goal in these studies is to find how certain drugs may be administered for maximum therapeutic effect, and to develop clues to more effective compounds, with blueprints for the synthesis of some of these. Chemical pharmacology is but one of the areas where research teamwork is advancing public health.

frontispiece . . .

In the upper left photograph, a doctor, studying under the research fellowship program of the National Heart Institute, observes the Van Slyke method of measuring the amount of gas present in blood samples. At upper right, investigators at the National Heart Institute laboratory of chemical pharmacology prepare apparatus for recording changes in blood pressure that result from use of experimental drugs. In the center, a young laboratory technician adjusts the chemical apparatus. At lower left, two research scientists discuss a cut-away model of the heart, while interpreting graphic findings related to heart physiology. At lower right, an investigator tests an experimental method of recording density changes and motions of the heart revealed by the electrokymograph.

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